

WHAT IS CLAIMED IS:

1. A semiconductor package comprising:
  - a substrate having a top surface and a bottom surface, the top surface including a plurality of substrate pads;
  - a semiconductor chip mounted on the substrate, the semiconductor chip having an active surface, a back surface, and a peripheral surface, the active surface including a plurality of chip pads;
  - a peripheral sealing portion formed along the peripheral surface of the semiconductor chip; and
  - a plurality of pattern leads providing electrical connections between chip pads and substrate pads, the pattern leads extending along an inclined surface of the peripheral sealing portion.
2. A semiconductor package according to claim 1, further comprising:
  - an encapsulant covering the semiconductor chip, the peripheral sealing portion, the substrate pads and the pattern leads.
3. A semiconductor package according to claim 1, wherein:
  - the peripheral sealing portion covers a peripheral portion of the active

surface.

4. A semiconductor package according to claim 2, further comprising:  
external connection terminals formed on the substrate, the external  
connection terminals being electrically connected to the substrate pads.

5. A semiconductor package according to claim 4, wherein:  
the external connection terminals are arranged on the bottom surface of  
the substrate and are selected from a group consisting of solder balls, solder  
bumps, microsprings and connecting pins.

6. A semiconductor package according to claim 4, wherein:  
the external connection terminals are arranged on the top surface of the  
substrate.

7. A semiconductor package according to claim 1, wherein:  
the inclined surface of the peripheral sealing portion forms an angle of  
between about 30 and 75 degrees relative to the top surface of the substrate.

8. A semiconductor package according to claim 1, wherein:

the peripheral sealing portion includes an insulating composition selected from a group consisting of photo solder resists and plastic resins.

9. A semiconductor package comprising:

a substrate having a top surface and a bottom surface, the top surface including a plurality of substrate pads;

a semiconductor chip mounted on the substrate, the semiconductor chip having an active surface, a back surface, and a peripheral surface, the active surface including a plurality of chip pads;

a first peripheral sealing portion formed along the peripheral surface of the semiconductor chip;

a plurality of first pattern leads providing electrical connections between a first group of chip pads and a first group of substrate pads, the first pattern leads extending along an inclined surface of the first peripheral sealing portion;

a second peripheral sealing portion formed along the first peripheral sealing portion and the first pattern leads; and

a plurality of second pattern leads providing electrical connections between a second group of chip pads and a second group of substrate pads, the second pattern leads extending along an inclined surface of the second

peripheral sealing portion.

10. A semiconductor package according to claim 9, wherein:

a second pattern lead extends across a first pattern lead, electrical connection between the second pattern lead and the first pattern lead being prevented by an interposed portion of the second peripheral sealing portion.

11. A semiconductor package according to claim 9, wherein:

the first group of chip pads is completely separate from the second group of chip pads.

12. A semiconductor package according to claim 9, wherein:

at least one chip pad is included in both the first group of chip pads and the second group of chip pads.

13. A semiconductor package according to claim 9, further comprising:

an encapsulant covering the semiconductor chip, the first peripheral sealing portion, the substrate pads, the first pattern leads, the second peripheral sealing portion and the second pattern leads.

14. A semiconductor package according to claim 9, wherein:  
  
the first peripheral sealing portion covers a first peripheral portion of  
  
the active surface; and  
  
the second peripheral sealing portion covers a second peripheral portion  
  
of the active surface.
15. A semiconductor package according to claim 9, further comprising:  
  
external connection terminals formed on the substrate, the external  
  
connection terminals being electrically connected to the substrate pads.
16. A semiconductor package according to claim 15, wherein:  
  
the external connection terminals are arranged on the bottom surface of  
  
the substrate and are selected from a group consisting of solder balls, solder  
  
bumps, microsprings and connecting pins.
17. A semiconductor package according to claim 15, wherein:  
  
the external connection terminals are arranged on the top surface of the  
  
substrate.
18. A semiconductor package according to claim 9, wherein:

the inclined surface of the first peripheral sealing portion forms an angle of between about 30 and 75 degrees relative to the top surface of the substrate; and

the inclined surface of the second peripheral sealing portion forms an angle of between about 30 and 75 degrees relative to the top surface of the substrate.

19. A semiconductor package according to claim 9, wherein:

the first and second peripheral sealing portions include an insulating composition selected from a group consisting of photo solder resists and plastic resins.

20. A method for manufacturing a semiconductor package comprising:

mounting a semiconductor chip on a substrate, the semiconductor chip having a plurality of chip pads on an active surface and the substrate having a plurality of substrate pads on a top surface;

forming a first peripheral sealing portion, the first peripheral sealing portion enclosing a peripheral surface of the semiconductor chip and having an inclined surface;

forming first pattern leads to establish electrical connections between a

first group of the chip pads and a corresponding first group of the substrate pads, the first pattern leads being formed on the inclined surface of the first peripheral sealing portion.